

# Winnipeg Metal Culvert Co.

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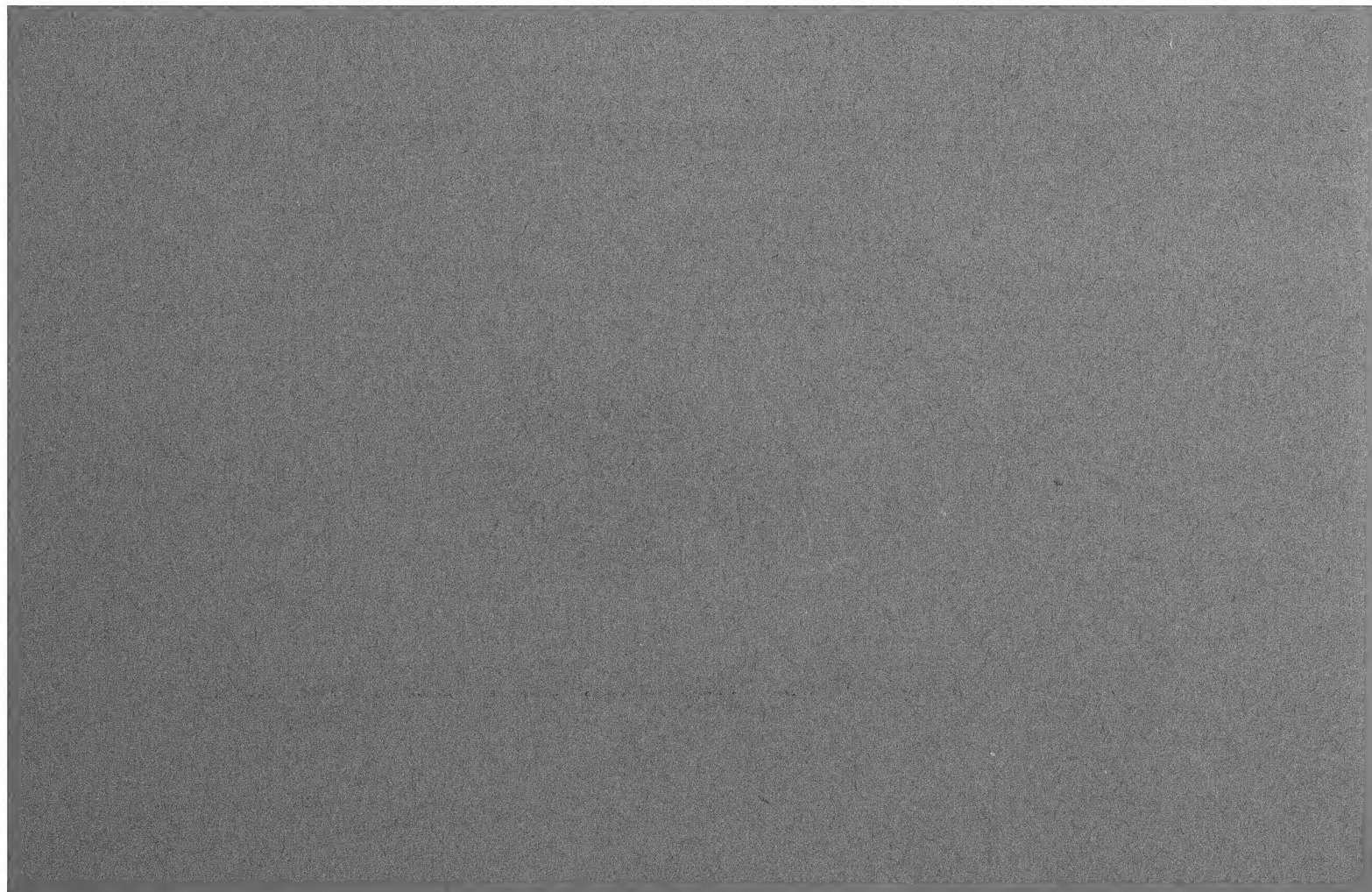
MANUFACTURERS OF  
CORRUGATED GALVANIZED  
METAL ROAD CULVERTS

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65 MERCHANTS BANK BUILDING  
WINNIPEG, MANITOBA

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OUR CULVERTS ARE MADE IN WINNIPEG

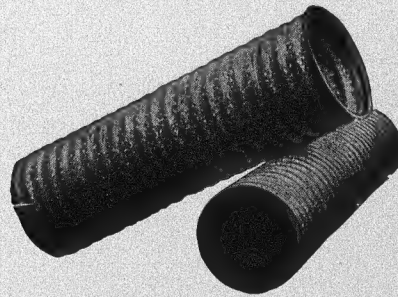




M65

# Corrugated Galvanized Metal Culverts

Manufactured and Protected under Canada Patent 101211

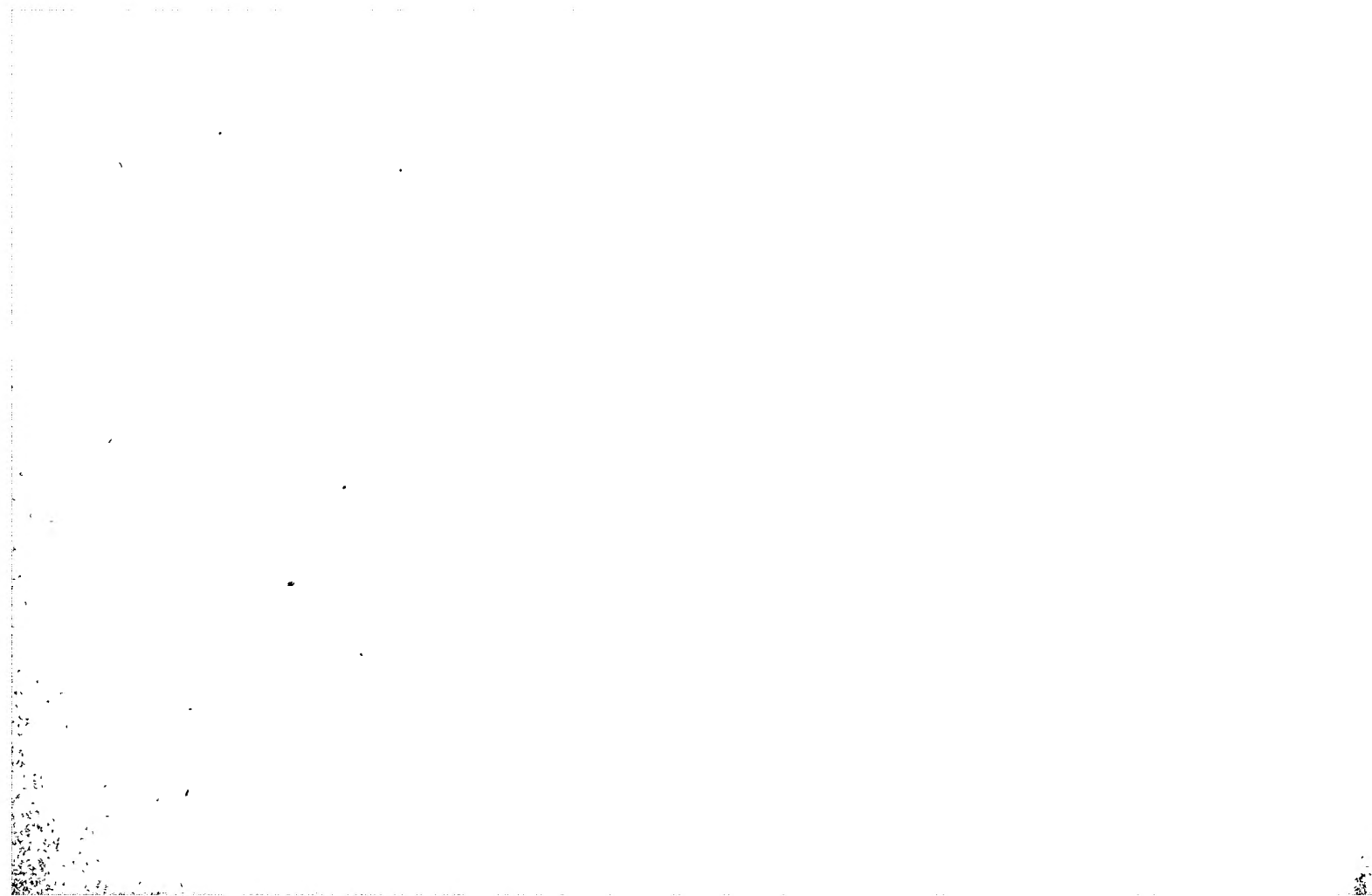


**WINNIPEG METAL CULVERT CO.**

WINNIPEG, MANITOBA

65 Merchants Bank Bldg.

Phone 6708



## **Facts Concerning Our Galvanized Corrugated Metal Road Culverts**



It is a well recognized fact that the culvert problem is one of importance to tax payers, municipal officials and road overseers; that an enormous amount of money has been spent each year in the past in repairing and replacing culverts constructed out of plank or vitrified sewer pipe. It is also a well known fact that the life of an ordinary plank culvert, made out of such lumber as can be purchased at the present time, is not more than four or five years at the most, where it is subject to hard usage.

We are now placing these culverts on the Canadian market for the first time, but they have been on the American market for fourteen years. Thirty-five companies are now engaged in the manufacture of these culverts. The nearest company to Winnipeg is the company located at Fargo, N. D. The cuts of culverts in this book are made from photos of culverts placed during the past three years by this company. The photographs speak for themselves.

Galvanized Corrugated Metal Culverts are made of sheet metal, heavily coated with zinc spelter, corrugated and formed into tubes, and these are riveted into a continuous culvert. We do not want you to confuse sheet metal with cast iron, or any irons of that character, for culverts made of that class of material are easily broken by a sudden jar. Sheet metal is different from ordinary iron and steel, for these contain a large quantity of carbon and magnesia, the two substances most susceptible to rust and corrosion.

There are many features that make our culverts far superior to any other culverts on the market at the present time.

**FIRST.** They are absolutely safe and unbreakable.

**SECOND.** Freezing and thawing cannot affect them.

**THIRD.** Galvanized Corrugated Metal Culverts need no repair.

**FOURTH.** They are easily and cheaply placed in the ground.

Our culverts have been in continuous use for the past fourteen years and we have never yet knowh of one that had to be repaired in any shape or form. Being firmly riveted together, floods cannot injure them. The fact that they are light, easy to handle, and can be cheaply put in, is an item worth considering by road officials and tax payers. We know that if you will take into consideration all of the good points that can be set forth in favor of Galvanized Corrugated Metal Culverts, and also consider their lasting qualities compared with any other culverts on the market today, you will readily come to the conclusion that they are by far the best and cheapest offered in the way of small water conduits.

We absolutely guarantee our Galvanized Corrugated Metal Culverts not to break or crack from freezing, or from the freezing and heaving of the earth. We also guarantee that when they are placed in position and properly put in, they will carry any tonnage, traction engine, threshing outfit or conveyance passing over your highways.

We demonstrated the great strength of these culverts by running a 15-ton Sawyer-Massey engine upon them at the Winnipeg and Brandon Fairs, and at a Local Improvement District Convention held in Regina on April 7th and 8th, we again demonstrated the great carrying power of these culverts by running a large American-Abell engine upon them. The culverts did not suffer any damage.

We are reproducing on pages 7 and 9 cuts of photos taken at Winnipeg and Regina.

For price list see page 31.

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**WINNIPEG METAL CULVERT COMPANY**  
**WINNIPEG, MAN.**



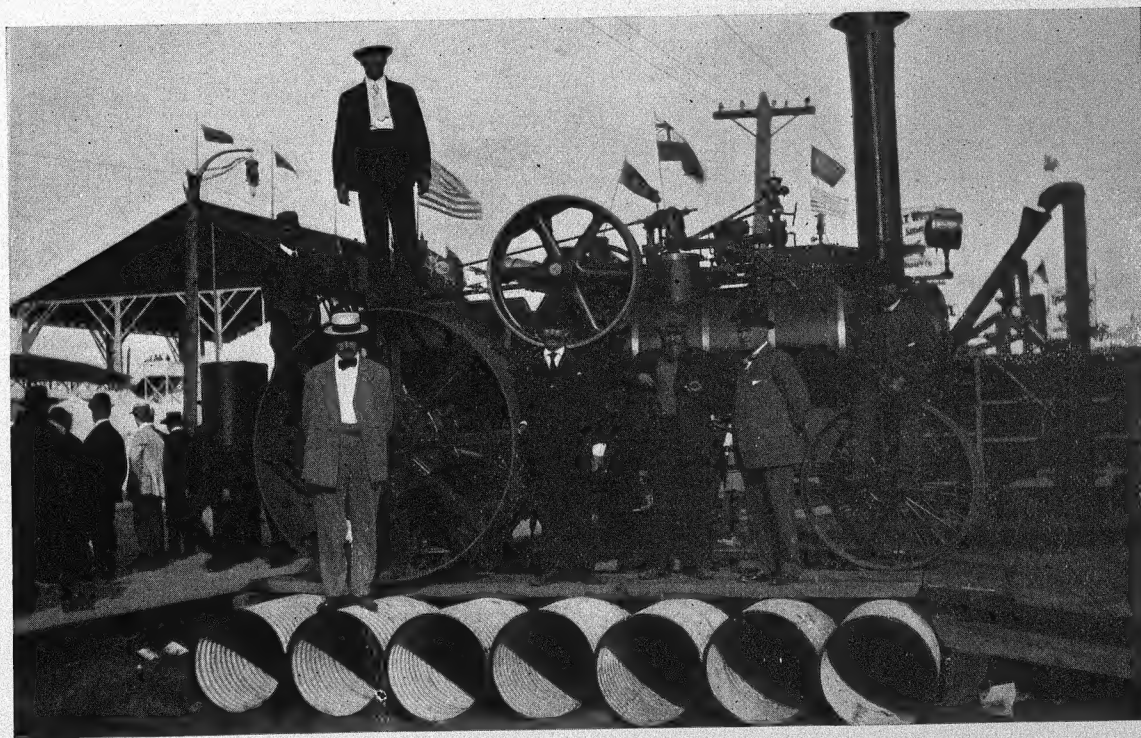
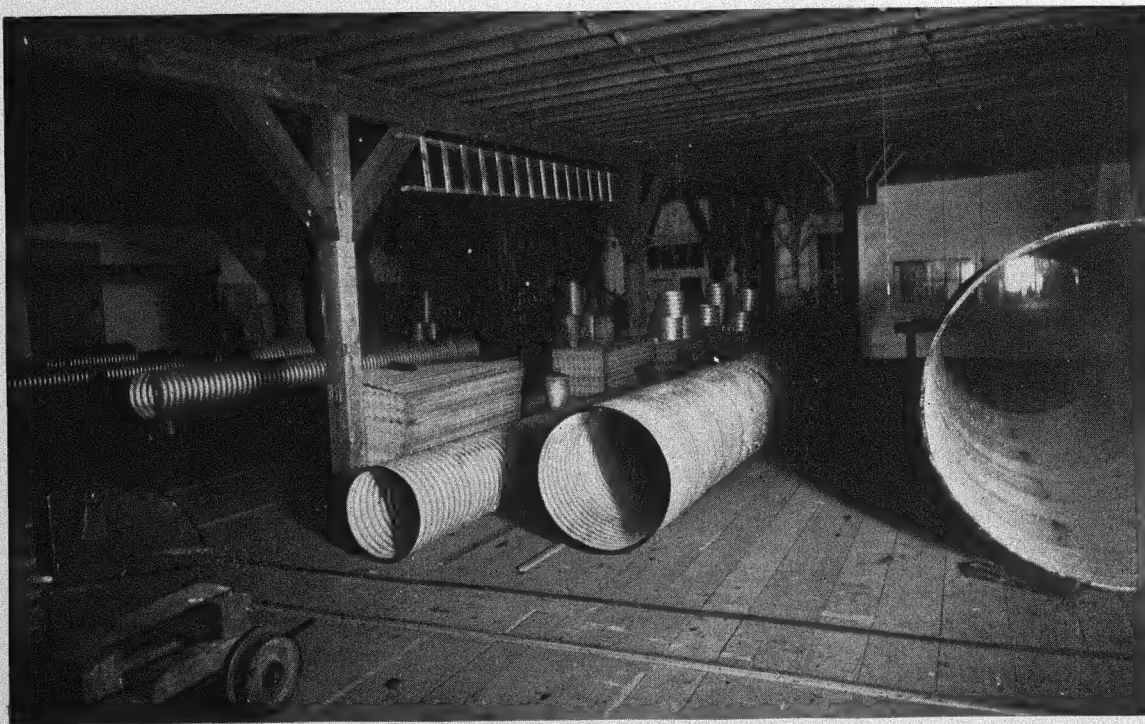


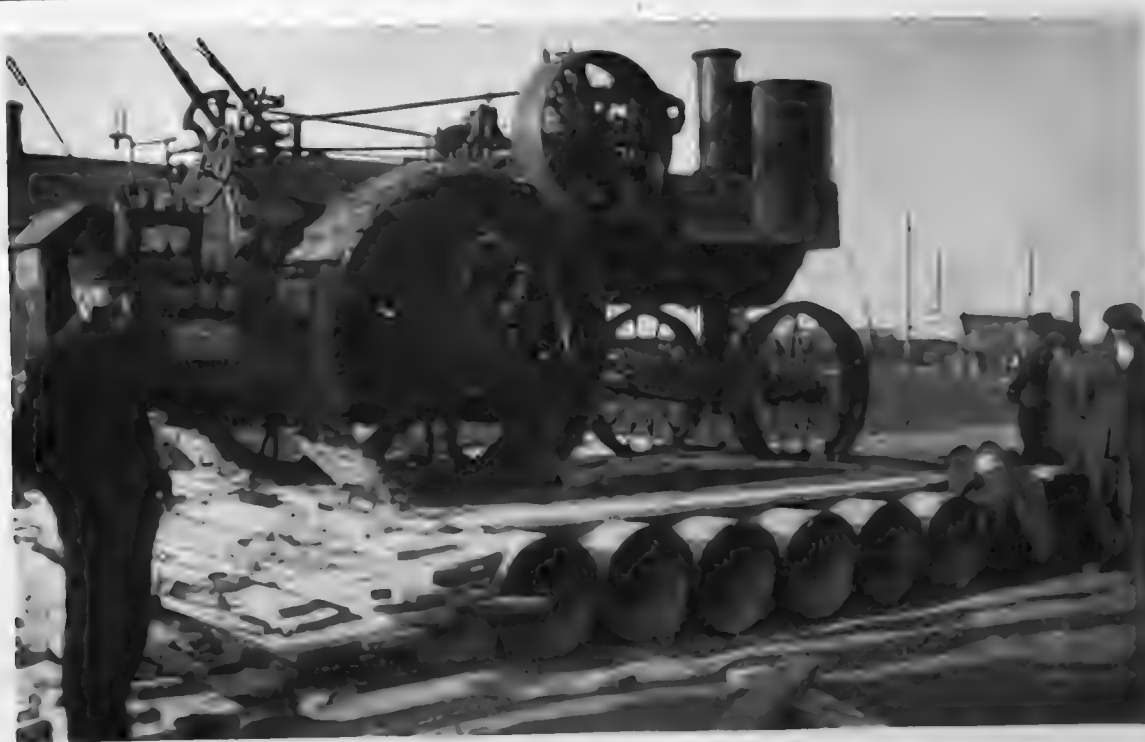
EXHIBIT MADE AT WINNPEG INDUSTRIAL EXHIBITION, 1907.

Our  
Culverts  
Will Carry  
Any Weight.



Our  
Culverts  
Are Well  
Made by  
Competent  
Workmen.

INTERIOR VIEW OF FACTORY BUILDING.



**The  
Baro  
Culvert  
Supporting  
15-ton  
Engine.**

EXHIBIT MADE AT REGINA, APRIL 8, 1908, AT LOCAL IMPROVEMENT DISTRICT CONVENTION.



Guaranteed  
to  
Sustain  
Any  
Load.

A SEVERE TEST WITH A HEAVY LOAD—NO DEFLECTION



HEAVY ENGINE BACKED DOWN ON RARE CULVERT—CULVERT UNHARMED

Tile  
Culverts  
Would  
Not Stand  
This Test.



**Absolutely  
Safe  
and  
Unbreak-  
able.**

36-INCH CULVERT COVERED ONLY WITH STRAW WAS CROSSED BY TRACTION ENGINE





6000 Feet  
Sold to  
One Rail-  
road in  
1907.

36 INCH CULVERT 60 FEET LONG UNDER RAILROAD GRADE 10 FEET HIGH



Will  
Stand  
The  
Sverest  
Tests

6 INCH CULVERT 64 FEET LONG UNDER RAILROAD GRADE 16 FEET HIGH



When Rip-  
rapped with  
Boulders  
Culverts  
Cannot  
Wash Out.

48-INCH CULVERT UNDER ROADWAY NEAR EISELEY, LA MOURE COUNTY, N. D.



**Large  
Culverts  
Are as  
Strong as  
Small Ones**

6-FOOT CULVERT NEAR EDGELEY, LA MOURE COUNTY, N. D.



18-INCH CULVERT ON MINNESOTA STATE EXPERIMENT FARM AT CROOKSTON

Cement  
Roads  
Make  
Culverts  
Permanent.



Engineers  
Prefer  
Them  
to Small  
Bridges.

36-INCH CULVERT IN DRAINAGE DITCH NEAR CROOKSTON, MINN.





6-FOOT CULVERT IN DRAINAGE DITCH NEAR MOORHEAD, MINN.—WITH CEMENT ENDS

**Cheaper  
and  
Better  
Than  
Bridges.**



One   
Continuous  
Length  
Easy to  
Put In.

14 INCH CULVERT 25 FEET LONG TO BE USED IN RAILROAD GRADE



5-FOOT CULVERT NEAR BEARDSLEY, MINN.—CHEAPLY PUT IN

Use Old  
Bridge  
Planking  
For Retain-  
ing Walls.



You Buy  
Planks in  
Carloads,  
Why Not  
Culverts?

MIXED CAR OF CULVERTS SHOWING ASSORTED SIZES NESTED TOGETHER



6-FOOT CULVERT NEAR BROWNS VALLEY, MINN., WHERE BRIDGE WASHED OUT

Our  
Culverts  
Stand  
Where  
Bridges  
Wash Out.



Our Large  
Culverts  
Carry  
Great  
Volumes  
of Water.

ANOTHER VIEW OF THE SAME CULVERT SHOWING LARGE OPENING FOR WATER





A 42 INCH CULVERT, LOCATED  $3\frac{1}{2}$  MILES SOUTHWEST OF EDGEMOY, N. D.

All  
Sizes  
Give  
Perfect  
Satisfaction  
Wherever  
Used



It Does  
Not Take  
An Expert  
To Put  
These  
Culverts In.

A SAMPLE CARLOAD OF OUR CULVERTS READY FOR SHIPMENT

**WHAT PEOPLE SAY ABOUT OUR CULVERTS.**

Crawfordsville, Ind., January 31, 1907.

John Mastin being first duly sworn, upon his oath says, that he has been a resident of Montgomery County, Indiana, for fifty-three (53) years and that he was Road Supervisor in District No. six (6) of Union Township, Montgomery County, for nine years and that he placed in position twelve (12) years ago, a culvert similar to those manufactured by the Winnipeg Metal Culvert Co., of Winnipeg, Man., and that said culvert is apparently in perfect condition, showing no signs of rust or decay, and that he used a great many of these culverts while Road Supervisor and considers said culverts to be the best water conductors on the market and unqualifiedly recommends them for use in wagon roads, railroads and interurban lines.

JOHN MASTIN.

Subscribed and sworn to before me this 31st day of January, 1907.

JESSIE W. CANINE, Notary Public.

My commission expires Sept. 4, 1910.

Crawfordsville, Ind., January 30, 1907.

Perl O. Bowers, being first duly sworn, on his oath says that he has been a resident of Montgomery County, Indiana, all of his life, and that he has seen the origin and growth of the manufacture and use of the Corrugated Road Culverts in Montgomery and other counties, and that are now being manufactured by the Winnipeg Metal Culvert Co., of Winnipeg, Man., and that he personally knows of these culverts that have been in actual service since 1899 that are apparently in as good condition as when placed in position. That he is at the present time street commissioner of the city of Crawfordsville, Indiana, and that said city has now in use a large number of said culverts, that are giving entire satisfaction, and that said city is contemplating putting several more of these culverts in place in the near future, and that he considers said culverts as the best conduit on the market, as regards service and costs for highways, railroads, interurban lines and brick sewer outlets.

PERL O. BOWERS.

Subscribed and sworn to before me, a Notary Public, this 30th day of January, 1907.

JESSIE W. CANINE, Notary Public.

My commission expires Sept. 4, 1910.

**LETTERS WRITTEN TO NORTH DAKOTA METAL CULVERT CO.**

**Read These Testimonials From Your Neighbors.**

Fargo, May 15, 1906.

Gentlemen: We have one of your Corrugated Galvanized Metal Culverts in use at the entrance to the North Dakota Fair Grounds at Fargo, N. D., and from experience and observation will want more; think they are the best and cheapest culverts on the market. We would cheerfully recommend their use to anyone needing a durable, cheap culvert, embracing all the points to be had in a first class culvert.

Very truly yours,

**NORTH DAKOTA FAIR ASSOCIATION,**

Wm. A. Scott, President,

Chas. E. Willson, Secretary.

Fargo, May 1, 1906.

Gentlemen: We are using one of your Corrugated Galvanized Metal Culverts and think it is a splendid success. It is, we believe, better than anything that has been placed on the market in that line, being light and easily placed in position, but still strong enough to bear any weight likely to come upon it. We highly recommend same to all highway officers.

Very truly yours,

**NORTH DAKOTA AGRICULTURAL COLLEGE,**

By J. H. Worst, President.

Mitchell, S. D., December 20, 1907.

Gentlemen: Our county put in some of your Metal Culverts on trial and I am satisfied they are all right, just what we have been wanting, easy of setting and durable. We expect in the future to use more of them.

Very truly yours,

WM. NASH,

Chairman Board of County Commissioners, Davison Co., S. D.

January 7, 1907.

Gentlemen: The culverts purchased by us for use on our line to the Fair Grounds have given good satisfaction. Should we build any track this season, your culverts will be used exclusively.

**FARGO & MOORHEAD STREET RAILWAY CO.,**

By C. B. Brown, Gen. Mgr.

Rutland, S. D., December 21, 1907.

Dear Sir: The Metal Culverts that we got from you for our Township gave the best of satisfaction and I believe they are the only thing for culverts and small bridges.

Yours truly,

G. F. GRAFF,

Chairman Board of Supervisors.

**LETTERS WRITTEN TO NORTH DAKOTA METAL CULVERT CO.**

Flandreau, S. D., January 18, 1908.

Gentlemen: We bought a number of Corrugated Metal Road Culverts for Moody County last year, both small and large sizes, from your company and have proven satisfactory in every detail. There are points about them that make them superior to any culvert in use for road purposes today. We consider them cheaper, know their lasting qualities are alright, they are easy to handle, and can be put in ground quicker, in fact, half the time of other culverts, and then you have something permanent. Taking these facts into consideration, I can recommend your culverts to taxpayers, township boards of supervisors and county commissioners in years to come to be the most practical culvert to use. We will use them the coming season.

Very truly yours,

CHARLES DYCE,

Chairman Board County Commissioners.

Madison, S. D., December 20, 1907.

Gentlemen: We have used your Metal Culverts of various sizes in this county during the past season and so far we have found them entirely satisfactory. It is the only culvert so far that has given us entire satisfaction, and the only kind that we shall use during the coming season.

CHARLES BINGHAM,

Chairman Board County Commissioners.

January 16, 1907.

Gentlemen: One of our 48-inch culverts, purchased from you last spring, being covered with only 6 inches of ground, carried a 30-horse power traction engine without the slightest sign of carrying a load. Having seen lumber culverts put in and taken out again in 3 years, the lumber all rotten, I have been thinking there should be something to take the place of lumber, and I believe you have something to take its place. If all town officers could see the tests your culverts have withstood (or would believe others that have seen them), I don't believe there would be another plank sold for bridge purposes, unless across a river.

EMIL C. LOHMANN,

Clerk of Nordick Township, Kent, Minnesota.

January 27, 1908.

Gentlemen: We have used your corrugated metal pipe on our sixty miles of new road constructed last year. We adopted your culverts after a very thorough investigation and are glad to be able to state that we have a better opinion of your culverts at this time than we did at the time we adopted them. I knew of nothing better for the money.

Yours very truly,

SOUTH DAKOTA CENTRAL RY. CO.,

By P. F. Sherman, President.

**LETTERS WRITTEN TO NORTH DAKOTA METAL CULVERT CO.**

January 9, 1907.

Gentlemen: The Corrugated Metal Culverts, purchased from you last year, have proven entirely satisfactory in every respect. There are points about them that make them far superior to any culverts on the market. In the first place, they are cheaper than others. Second, they will certainly outlast any other culvert—yes, many times over. Third, they are lighter and easier to handle. Fourth, they can be put in the ground in half the time it takes to put in other culverts. Considering these facts, I honestly believe that the Corrugated Metal Culverts are by a good deal the best on the market today.

O. K. KNUTSON,

Clerk of Walle Township, Thompson, N. D.

Cavour, S. D., December 30th, 1907.

Gentlemen: In regard to your Corrugated Metal Culverts we will say they are all that you recommend them to be, and we are well satisfied with those that we bought of you last year, which was five in number. They cost a little more in the start, but after you have them in they will last a long time, while other culverts will have to be renewed every two or three years. Our Township has come to the conclusion they will use no other than the Corrugated Metal Culverts manufactured by your company.

Yours truly,

FRANK DOLLENBACHER, Town Clerk.  
JOHN FORD, Chairman.

Flandreau, S. D., December 27, 1907.

Gentlemen: In reply to your favor of the 19th I would say that in using your Metal Culverts during the past year impressed me so with the idea that they were preferable to anything we had used before, and we have yet no reason to think differently.

Respectfully yours,

J. A. SMITH, Mayor.

January 14, 1907.

Gentlemen: We crossed over the culverts with engines and they never gave any, and will say they are just the right thing. Will say that I think the time of wood culverts has passed. The metal culverts cost a little more at first, but they will last a lifetime. The well casing that I received from you is one of the best things in the world. It means no more rotten water from the curbing, that always tastes after wood. It is better than brick. It will not crack or break with the frost. Rats and mice cannot chew holes in them and drown in the water. I made a test with a 12-pound sledge, by striking it with all the force I could get, on one of the corrugations, and could not make a mark.

A. STOBLE,

Clerk of Angus Township, Angus, Minnesota.



Diameter	Price per Ft.
12 inches . . . . .	\$1.25
15 " . . . . .	1.45
18 " . . . . .	1.60
24 " . . . . .	2.50
30 " . . . . .	3.30
36 " . . . . .	4.15
42 " . . . . .	5.20
48 " . . . . .	6.15
60 " . . . . .	7.00
72 " . . . . .	8.90

All Culverts delivered at your Station freight prepaid.

Prices subject to change without notice.

These prices are exactly the same as charged across the International Line for example, by the North Dakota Metal Culvert Co., Fargo, N. D.

We make no extra charge, although we are under heavier expense, duty, extra freight, higher labor, etc.

# TABLE OF CAPACITY OF CULVERTS

Diameter of Culverts	Capacity in Gallons per minute with 1 foot fall in 100 feet	Capacity in Gallons per minute with 2 feet fall in 100 feet	Capacity in Gallons per minute with 3 feet fall in 100 feet	Proper fall for different lengths of Culverts, based on 1 ft. fall in 100 feet
12 Inches.....	1,503 Gallons	2,119 Gallons	2,609 Gallons	18 Feet 2.16 Inches
15 ".....	2,773 "	3,910 "	4,113 "	20 " 2.40 "
18 ".....	4,582 "	6,460 "	7,954 "	22 " 2.64 "
24 ".....	9,665 "	13,627 "	16,778 "	24 " 2.88 "
30 ".....	17,526 "	24,711 "	30,425 "	26 " 3.12 "
36 ".....	28,489 "	40,169 "	49,456 "	30 " 3.60 "
42 ".....	37,956 "	53,517 "	65,891 "	34 " 4.08 "
48 ".....	56,393 "	79,494 "	97,898 "	36 " 4.32 "
60 ".....	98,513 "	138,903 "	171,018 "	38 " 4.56 "
72 ".....	155,400 "	219,114 "	269,774 "	40 " 4.80 "

